

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE

115FM06				
SHEAR PLATE ASSEMBLY, ITEM 115 (PIVOTED, PLANAR) ----- SV778540-56 (1) OR (ORU) ----- SV824133-8 (1)	2/2	Fails to close SOP shutoff valve. Linkage malfunction, adjustment shift.	END ITEM: Failure to shut the regulator bellows off when the 02 actuator is not in EVA position. GFE INTERFACE: Unable to prevent flow of SOP tank oxygen to suit during airlock repressurizatio n and suit doffing. SOP oxygen is vented into airlock during airlock repressurizatio n. MISSION: Loss of SOP pressure. Loss of use of one EMU. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Immediate. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - The actuator carriage material is nitronic 60 which provides good antigalling properties. The ways are lubricated by a solid film lubricant to assure low friction. The cable drives a cam which is coated with nituff to provide a hard low friction surface to prevent wear and provide low actuation loads. The flex cable is lubricated by grease while the teleflex rod translates within a Teflon lined casing for low friction and wear. The actuator mechanism is capable of three times the maximum translating load. B. Test - Component Acceptance Test - None. PDA Test - None. Certification Test - Certified for a useful life of 20 years from the date of manufacture. Successful refurbishment will extend useful life to 30 years max. (ref EMUM1-0491, EMUM1-0027). C. Inspection - Details are 100% inspected per drawing dimensions and surface finish characteristics. Details are manufactured from material with certified physical and chemical properties. All details, gases and test facilities are cleaned and inspected to HS3150 EM50A to preclude contamination clogging. D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, V1103.02 Orbiter Check. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing. F. Operational Use - Crew Response - PostEVA: Repress airlock. After repress open both purge valves, disconnect one glove and remove helmet. Then install SCOF. EMU is no go for EVA. Training - No training specifically covers this failure mode. Operational Considerations - Flight rules define loss of EMU for loss of SOP pressure regulation. EVA checklist procedures verify hardware integrity and systems operational status prior to EVA.

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-115 SHEAR PLATE ASSEMBLY
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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